

In the Claims

1-30 (canceled).

31 (new). A composition of matter comprising:

- (a) a chromatin insulator consisting of SEQ ID NO: 1;
- (b) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1;
- (c) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1 and (i) an enhancer, or a functional expression enhancing fragment thereof; (ii) a promoter domain or a functional expression promoting fragment thereof; or (iii) a DNA sequence coding for one or more polypeptides of interest;
- (d) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1 and one or more DNA sequences coding for regulatory elements selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES);
- (e) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1; one or more DNA sequences coding for regulatory elements selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES); and (i) an enhancer, or a functional expression enhancing fragment thereof; (ii) a promoter domain or a functional expression promoting fragment thereof; or (iii) a DNA sequence coding for one or more polypeptides of interest;
- (f) a vector comprising a DNA sequence coding for one or more polypeptides of interest through a polycistronic mRNA; one or more chromatin insulators consisting of SEQ ID NO: 1; and one or more DNA sequences coding for regulatory elements selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES);

- (g) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1; one or more DNA sequences coding for regulatory elements selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES); and a DNA sequence coding for one or more polypeptides of interest through a polycistronic mRNA;
- (h) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1 and one or more DNA elements selected from boundary elements, locus control regions (LCRs), matrix attachment regions (MARs), or elements for recombination and cassette exchange;
- (i) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1; one or more DNA elements selected from boundary elements, locus control regions (LCRs), matrix attachment regions (MARs), or elements for recombination and cassette exchange; and (i) an enhancer, or a functional expression enhancing fragment thereof; (ii) a promoter domain or a functional expression promoting fragment thereof; or (iii) a DNA sequence coding for one or more polypeptides of interest;
- (j) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1; one or more DNA elements selected from boundary elements, locus control regions (LCRs), matrix attachment regions (MARs), or elements for recombination and cassette exchange; and one or more DNA sequences coding for regulatory elements selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES);
- (k) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1; one or more DNA elements selected from boundary elements, locus control regions (LCRs), matrix attachment regions (MARs), or elements for recombination and cassette exchange; one or more DNA sequences coding for regulatory elements selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES); and (i) an enhancer, or a functional expression enhancing fragment thereof; (ii) a promoter

domain or a functional expression promoting fragment thereof; or (iii) a DNA sequence coding for one or more polypeptides of interest;

- (l) a vector comprising a DNA sequence coding for one or more polypeptides of interest through a polycistronic mRNA; one or more chromatin insulators consisting of SEQ ID NO: 1; one or more DNA elements selected from boundary elements, locus control regions (LCRs), matrix attachment regions (MARs), or elements for recombination and cassette exchange; and one or more DNA sequences coding for regulatory elements selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES);
- (m) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1; one or more DNA elements selected from boundary elements, locus control regions (LCRs), matrix attachment regions (MARs), or elements for recombination and cassette exchange; one or more DNA sequences coding for regulatory elements selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES); and a DNA sequence coding for one or more polypeptides of interest through a polycistronic mRNA; or
- (n) a host cell comprising:
  - (A) a chromatin insulator consisting of SEQ ID NO: 1;
  - (B) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1;
  - (C) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1 and (i) an enhancer, or a functional expression enhancing fragment thereof; (ii) a promoter domain or a functional expression promoting fragment thereof; or (iii) a DNA sequence coding for one or more polypeptides of interest;
  - (D) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1 and one or more DNA sequences coding for regulatory elements

- selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES);
- (E) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1; one or more DNA sequences coding for regulatory elements selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES); and (i) an enhancer, or a functional expression enhancing fragment thereof; (ii) a promoter domain or a functional expression promoting fragment thereof; or (iii) a DNA sequence coding for one or more polypeptides of interest;
  - (F) a vector comprising a DNA sequence coding for one or more polypeptides of interest through a polycistronic mRNA; one or more chromatin insulators consisting of SEQ ID NO: 1; and one or more DNA sequences coding for regulatory elements selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES);
  - (G) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1; one or more DNA sequences coding for regulatory elements selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES); and a DNA sequence coding for one or more polypeptides of interest through a polycistronic mRNA;
  - (H) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1 and one or more DNA elements selected from boundary elements, locus control regions (LCRs), matrix attachment regions (MARs), or elements for recombination and cassette exchange;
  - (I) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1; one or more DNA elements selected from boundary elements, locus control regions (LCRs), matrix attachment regions (MARs), or elements for recombination and cassette exchange; and (i) an enhancer, or a functional

- expression enhancing fragment thereof; (ii) a promoter domain or a functional expression promoting fragment thereof; or (iii) a DNA sequence coding for one or more polypeptides of interest;
- (J) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1; one or more DNA elements selected from boundary elements, locus control regions (LCRs), matrix attachment regions (MARs), or elements for recombination and cassette exchange; and one or more DNA sequences coding for regulatory elements selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES);
- (K) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1; one or more DNA elements selected from boundary elements, locus control regions (LCRs), matrix attachment regions (MARs), or elements for recombination and cassette exchange; one or more DNA sequences coding for regulatory elements selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES) and (i) an enhancer, or a functional expression enhancing fragment thereof; (ii) a promoter domain or a functional expression promoting fragment thereof; or (iii) a DNA sequence coding for one or more polypeptides of interest;
- (L) a vector comprising a DNA sequence coding for one or more polypeptides of interest through a polycistronic mRNA; one or more chromatin insulators consisting of SEQ ID NO: 1; one or more DNA elements selected from boundary elements, locus control regions (LCRs), matrix attachment regions (MARs), or elements for recombination and cassette exchange; and one or more DNA sequences coding for regulatory elements selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES); or

- (M) a vector comprising one or more chromatin insulators consisting of SEQ ID NO: 1; one or more DNA elements selected from boundary elements, locus control regions (LCRs), matrix attachment regions (MARs), or elements for recombination and cassette exchange; one or more DNA sequences coding for regulatory elements selected from 5'UTRs, introns, 3'UTRs, mRNA 3' end processing sequences, polyadenylation sites, or internal ribosome entry sequences (IRES) and a DNA sequence coding for one or more polypeptides of interest through a polycistronic mRNA.

32 (new). The composition of matter according to claim 31, wherein the promoter is selected from cellular or viral/phage promoters.

33 (new). The composition of matter according to claim 32, wherein said cellular or viral/phage promoter is mCMV-IE1, mCMV-IE2, hCMV, SV40, RSV, T7, T3, or a functional expression promoting fragment thereof.

34 (new). The composition of matter according to claim 31, wherein the polypeptide of interest is selected from FSH, LH, CG, TSH, growth hormone, interferon, TNF binding protein I, TNF binding protein II, IL-18BP, IL-6, IFNAR1, LIF or muteins, fragments, functional derivatives, fusion proteins thereof.

35 (new). The composition of matter according to claim 31, wherein the polypeptide of interest is adenosine deaminase (ADA), aminoglycoside phosphotransferase (neo), dihydrofolate reductase (DHFR), hygromycin-B-phosphotransferase (HPH), thymidine kinase (tk), xanthine-guanine phosphoribosyltransferase (gpt), multiple drug resistance gene (MDR), ornithine decarboxylase (ODC) and N-(phosphonacetyl)-L-aspartate resistance (CAD), puromycin acyltransferase (PAC), galactokinase, human folate receptor, or reduced folate carriers.

36 (new). The composition of matter according to claim 31, wherein the polypeptide of interest is luciferase, green fluorescent protein, alkaline phosphatase, and horseradish peroxidase or combinations thereof.

37 (new). The composition of matter according to claim 31, wherein said vector comprises one insulator positioned upstream and one insulator positioned downstream of the DNA sequence coding for a polypeptide of interest or said vector comprises at least two insulators positioned upstream and at least two insulators positioned downstream of the DNA sequence coding for a polypeptide of interest.

38 (new). The composition of matter according to claim 37, wherein at least two coding sequences are positioned between the insulators.

39 (new). The composition of matter according to claim 38, wherein the at least two coding sequences code for subunits of a multimeric protein.

40 (new). The composition of matter according to claim 39, wherein the first subunit is the alpha chain and the second subunit is the beta chain of a hormone selected from human FSH, human LH, human TSH or human CG.

41 (new). The composition of matter according to claim 39, wherein the first subunit is the beta chain and the second subunit is the alpha chain of a hormone selected from human FSH, human LH, human TSH or human CG.

42 (new). The composition of matter according to claim 39, wherein the first subunit is the heavy chain and the second subunit is the light chain of an immunoglobulin.

43 (new). The composition of matter according to claim 39, wherein the first subunit is the light chain and the second subunit is the heavy chain of an immunoglobulin.

44 (new). The composition of matter according to claim 31, wherein the host cell and the insulator are derived from different species.

45 (new). The composition of matter according to claim 31, wherein the host cell is a CHO cell.

46 (new). A process for the production of a polypeptide of interest comprising the step of transfecting a host cell with at least one vector according to claim 31, said vector comprising a polypeptide of interest.

47 (new). The process according to claim 46, comprising the step of culturing a host cell.

48 (new). The process according to claim 46, further comprising the step of isolating the polypeptide of interest from the host cells.

49 (new). The process according to claim 47, further comprising the step of isolating the polypeptide of interest from the host cells.

50 (new). The process according to claim 46, wherein the transfection is a stable transfection.

51 (new). The process according to claim 47, wherein the transfection is a stable transfection.